nrg600BT08-M

Power :: 600A Load Center with nrgSMART™ Remote Monitoring

Installation Guide

nrgSMART describes the family of distributed network monitoring and management products, from BDFB's, high current and low current secondary panels, as well as Web interface software and data server solutions. nrgSMART allows you to collect performance data on distributed assets and tools to help you efficiently access business critical and actionable information.

Telect recognizes the industry need to manage distributed assets more efficiently, get better power performance out of deployed assets, as well as pursue realistic and achievable alternative energy goals. Through nrgSMART, access to data at the equipment level provides the foundation for managing performance of a distributed DC power distribution system.

- **Individual circuit monitoring:** measure power at the circuit level. This enables powerful trend analysis and insights into equipment performance and enables preventative maintenance processes.
  - **High accuracy, 100% passive monitoring, modular sensor modules**
- **Collect feed voltage, circuit current, and temperature**
- **Network Data Collection:** Intelligent interpretation of the collected data, based on equipment data signature (smart alarms), drives relevant business decisions.
  - **Hosted Data Services available through the nrgSMART-ADH service**
  - **SNMP Interface comes standard when used with the nrgCONTROL-BT**
- **Data Analytics:** When used in conjunction with the nrgCONTROL-BT and nrgSMART-ADH Service, the nrg600BT08-M can be remotely monitored through the nrgSMART web portal and dashboard views. Remotely access the data that is important to you. Instantly see real-time results at any of your distributed sites.

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Overview

Telect's nrg600BT08-M 600A dual-feed 8/8 circuit breaker/TFD Load Center with 5 GMTs features -48V operating voltage to fit in legacy and "next-gen" network applications, with advanced circuit level monitoring features engineered into a 4RU footprint. Each of the dual feeds contains eight positions for either bullet-style breakers or TFD fuse holders. Each of the dual feeds also includes five GMT fuses, providing ample capacity for distribution to a broad range of components.

The panel provides total front access to fuses and LED status. Below the status LED console is a pull-out designation card holder.

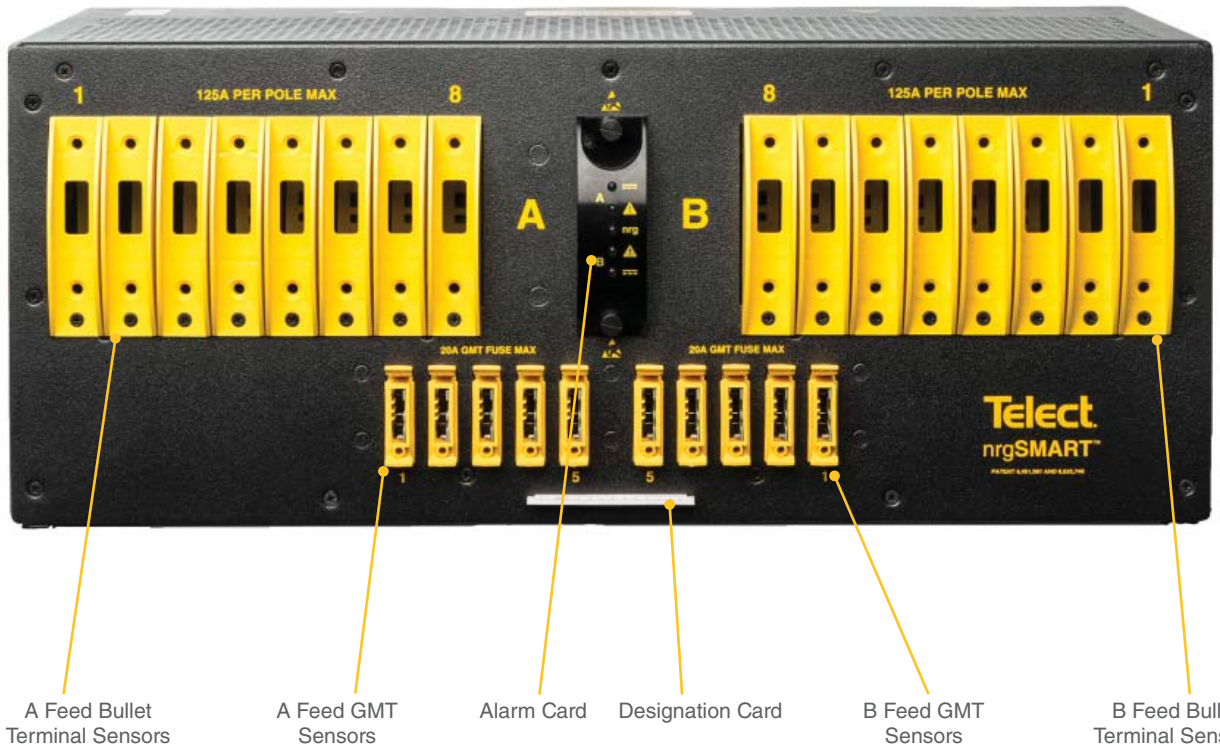
All terminals for inputs, outputs, ground, and alarms are on the rear of the panel. All terminals are covered by a single full-width transparent terminal cover:

- Inputs are studs for dual-hole lugs.
- Ground terminals are dual, threaded holes for gound bolts.
- Output studs for dual-hole lugs and screw posts for GMTs.
- Power/fuse alarm terminals are wire wrap pins.

The bullet terminals can accept either TFD fuse holders or bullet terminal breakers. Single pole, double pole, and triple pole breakers are also supported.

The GMT fuse holders are mounted inverted so that the GMT indicator flag flips downward when tripped, making identification and detection easier, especially on taller racks. In addition, the GMT fuse holders/ sensors are generously spaced for easy grip of fuses and better heat dissipation.

Figure 1 – nrg600BT08-M Front View



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nrg600BT08-M

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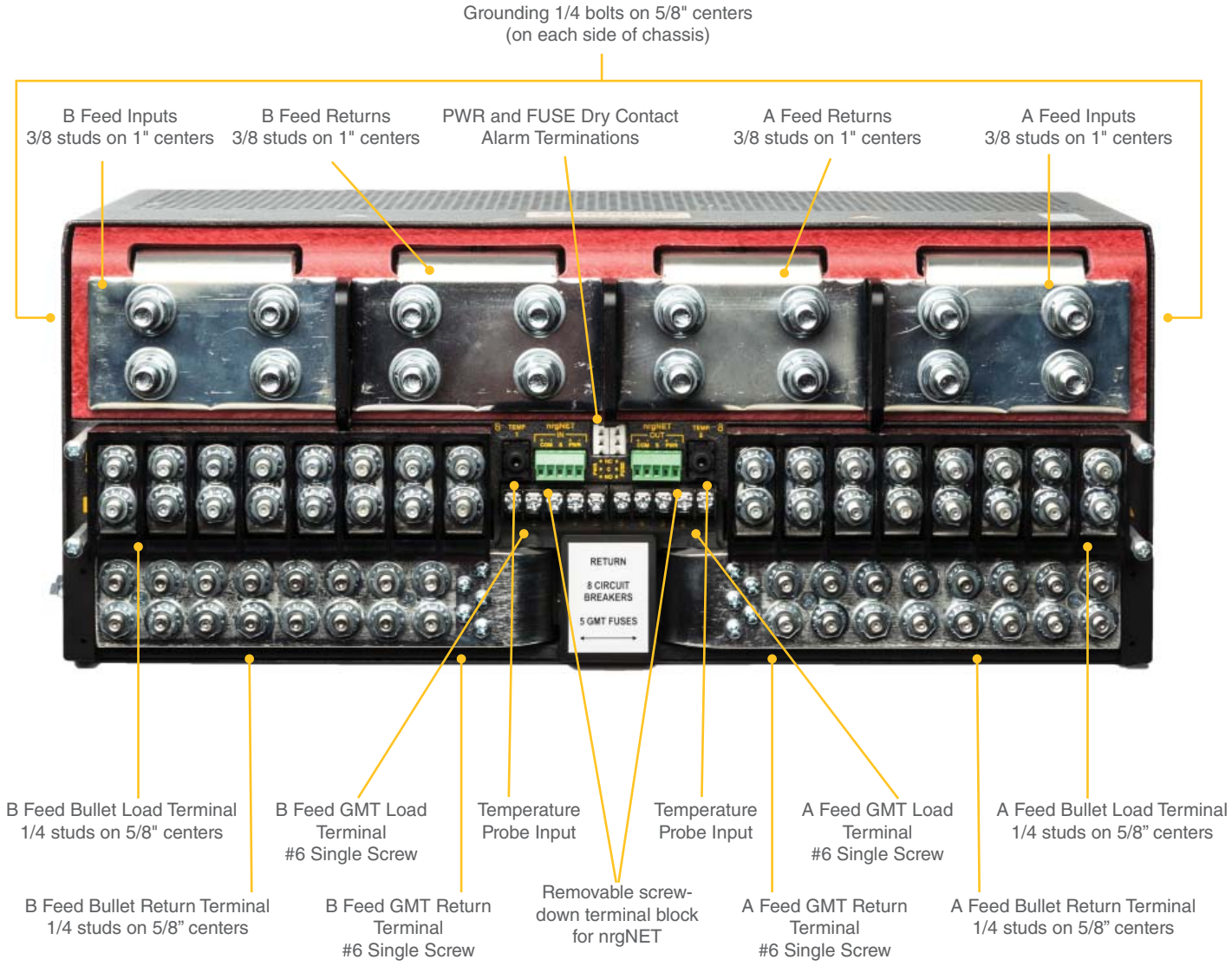
Figure 2 – nrg600BT08-M Rear View



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Specifications

Inputs	
Voltage range, nominal voltage	-40V to -60V (Nominal -48Vdc)
Max input load rating	600A per side at max
Short circuit withstand rating	5000A (breakers/fuses); 450A GMT
Nominal power loss at full load	Less than 75W per side @ 28,000W full load per side (600A x 48V)
Percentage of full power dissipation at nominal voltage	Less than 1%
Max. input interrupt device	750A
Input Terminal Studs (with nuts, flat washers, and spring washers) for dual-hole compression lugs	• Two pair of 3/8 – 16 studs on 1 in. centers per terminal [max. lug width of 1.94 in. (49.2 mm)] per pair • Torque nut (using 9/16 in. or 15 mm wrench) to 150 in.-lb (~17 N•m), max.
Input wire size	#1 AWG to 750 MCM
Dual-Hole Outputs	
Max. output single-pole, long-delay circuit breaker (ea.)	100A
Max. output TPS or TLS	125A
Max. output load (ea.) - continuous	100A
Minimum short circuit interrupt rating	5000A
Output terminal studs (with KEPS, nuts, and washers) for dual-hole compression lugs	• 1/4 - 20 studs on 5/8 in. centers [max. lug width of 0.680 in. (15.8 mm) for a BATT terminal and 0.70 in. (17.7 mm) for a RETURN terminal]. • Torque bolts (using 7/16 in. or 12 mm wrench) to 50 in.-lb (~5.5 N•m), max.
Output wire size	#14 AWG minimum
GMT Outputs	
Max. GMT output fuse (ea.)	20A
Max. GMT output load (ea.) - continuous	14A
Minimum short circuit interrupt rating	450A
GMT output terminals for compression lugs	• 10, removable, #6-32 panhead screws (max. lug width of 0.29 in. [7.4 mm]). • Torque to 6.3 in.lb (~0.7N•m), max.
GMT output wire size	#22 AWG to #12 AWG, depending on output fuse rating
Dry Contact Alarms	
Alarm wire size	#22 to #18 AWG
Alarm terminals	Wirewrap
Relay contact ratings	Dry Form-C contacts (1A @ 30 VDC, 0.5A @ 60 VDC, 0.3A @ 125 VAC)
Max. Alarm Power Rating	@24V: 72 mA (1.73W) @48V: 147 mA (7.06W)

Grounding	
Earth GND terminal bolts (with washers) for dual-hole compression lug	• Two pair of 1/4 - 20 threaded holes on 5/8 in. centers. • Torque bolts (using 7/16 in. or 12 mm wrench) to 50 in.-lb (5.5 N•m), max.
Ground wire size	#2 AWG recommended
Voltage Sensor	
Sensor Accuracy	0 to -19.99V: ±0.3V -20V to -60V: ±0.1V
Voltage Measurement Range	0 to -60VDC
Feed Voltage Detection	0 to -19.99V: Alarm -20V to -60V: Normal
NOTE: • Voltage measurement may be slightly different than at input terminal blocks due to the voltage drop within the panel. • Sensors are factory calibrated and do not require user adjustment.	
Communication	
nrgNET sensor and alarm card power	-48VDC nominal
nrgNET data communication	RS-485
nrgNET connector	Removable 5-pin connector with screw down terminals
nrgNET connector functions	nrgNET IN from the nrgCONTROL or nrgSMART Panel, nrgNET OUT to next inline nrgSMART panel
Supported protocols	Proprietary nrgNET used to communicate between panels and controller
Fit and Finish	
Material	14-gauge steel
Color	Pewter grey powder coat
Mechanical	
Dimensions (L x W x H):	12” x 17.25” x 7”
Rack space	4RU
Environmental	
Operating temperature	-5° to +44°C
Humidity	0 to 90%, non-condensing
Weight (approximate)	
Installed	47 lb (21.3kg)
Shipping	49.1lb (22.3kg)
Compliance	
	UL, NEBS level 3

Warranty:
- Standard 1 year warranty on all parts.
- The warranty is extended through the addition of the annual maintenance and support contract (nrgSMART- APSC).

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Important Installation Guidelines:

- **Elevated Operating Ambient Temperature ::** If you install the rack in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, take care to install the equipment in an environment compatible with the maximum operating temperature.
- **Reduced Air Flow ::** Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- **Mechanical Loading ::** Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- **Circuit Overloading -** Give consideration to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Use appropriate consideration for equipment nameplate ratings when addressing this concern.
- **Reliable Earthing ::** Maintain reliable earthing of rack-mounted equipment. Pay particular attention to supply connections other than direct connections to the branch circuit (e.g., use of power strips).
- **Disconnect Device ::** Incorporate a readily accessible disconnect device in the building installation wiring.

Inspection

Please read and understand all instructions before starting installation. If you have questions, contact Telect Technical Support at support@telect.com or call 1.509.926.6000.

When you receive the equipment, carefully unpack it and compare it to the packaging list. Please report any defective or missing parts to Telect Quality at quality@telect.com or call 1.509.926.6000.

Telect is not liable for transit damaged. If the product is damaged, please report it to the carrier and contact Telect Quality.

NOTE: The nrg600BT08-M is suitable for installation as part of a Common Bonding Network (CBN) for installation in Network Telecommunication Facilities an OSP.

Installation

ALERT

ALERT! It is recommended that this product is installed within a restricted access location where access is through the use of a tool, lock and key, or other means of security, and is controlled by the authority responsible for the location. This product must be installed and maintained only by qualified technicians.

Verify all connections meet requirements specified in local electric codes or operating company guidelines before supplying power. Unit shall be protected by a listed circuit breaker or branch-rated fuse sufficient to interrupt power levels specified on the preceding page.

Rack Mounting

- The nrg600BT08-M panel can be mounted in 19-in. & 23-in. EIA and WECO racks.
- The nrg600BT08-M panel can be flush-mounted, 2-in extended, or 4-in extended.

1. Use the 12 screws provided to fasten the brackets to the panel.
2. Locate an unused rack position and mount panel using at least four sets of fasteners (screws, flat washers, and star washers provided) per side. It's best to mount the panel as high as possible on the rack.
3. Tighten screws to 35 in.-lb (4.29 N•m). Telect recommends using a seismic rack for best rigidity. Also, if you intend on installing more than one panel per rack, you need to plan a rack arrangement that dissipates heat efficiently.
4. Loosen (you need not remove) four screws securing transparent terminal cover to the rear of the panel.
5. Remove the cover.

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⚠ WARNING

WARNING! Failure to properly ground this equipment can create hazardous conditions for installation personnel and for the equipment.

ⓘ ALERT

ALERT! Only use components and crimping tools approved by agencies or certifying bodies recognized in your country or region, such as Underwriter's Laboratories (UL), TUV, etc.

6. Use a listed (approved) crimping tool to attach a listed (approved), dual-hole compression lug for 1/4-20 studs on 5/8-in. centers onto #2 AWG ground wire.

7. If desired (highly recommended), lightly coat anti-oxidant on lug, grounding terminal, and surrounding contacting surface.

8. Connect the lug using the 1/4 -20 bolts, lock washers, and flat washers provided.

9. Tighten bolts to ~50 in.-lb (~5.6 N•m), max.

10. Make sure the power is off (open breaker, dummy fuse, or open fuse holder at primary power distribution unit or battery) before connecting this panel's input cables to a PDU or battery.

⚠ WARNING

WARNING! Before connecting input power cables, make sure the input power to the panel is turned off.

11. For input wiring - wiring used as inputs to this load center:
    - Crimp dual-hole compression lugs onto #1 AWG to 750MCM copper wires. The choice of input wiring depends on the following criteria:
        - Input interrupt device rating affects the size of input wiring.
        - Ambient operating temperature affects the type of input wire insulation. Use Table 1 to choose the correct temperature-rated input wires. For further information consult the National Electrical Code (NEC).

Table 1 - Temperature Rating

Ambient Operating Temperature Range:	Max. Current Rating Per Side:	Min. Cable Insulation Temperature Rating:
-5° to 49°C (23° to 120°F)	600A	75°C (167°F)
49° to 55°C (120°F to 131°F)	550A	75°C (167°F)
49° to 55°C (120°F to 131°F)	600A	90°C (194°F)

12. Insulate lug barrels with UL94 V-0-rated heat-shrink tubing.

13. Clean terminals and lugs with nonabrasive, nonmetallic pad.

14. If required, lightly coat anti-oxidant on lugs and input **BATT** and **RETURN** terminals, and then connect the lugs to input terminals on the back of the panel.

15. Tighten lugs to 150 in.-lb (~17 N•m), max.

16. Make sure all interrupter positions are either empty, off, or contain dummy fuses (phoney, inoperative all-plastic slugs).

ⓘ ALERT

ALERT! Only qualified service personnel should replace fuses. The installer must verify that a readily accessible protection device is incorporated in the building wiring feeding the panel: 750A (max.) protection device for a 600A panel.

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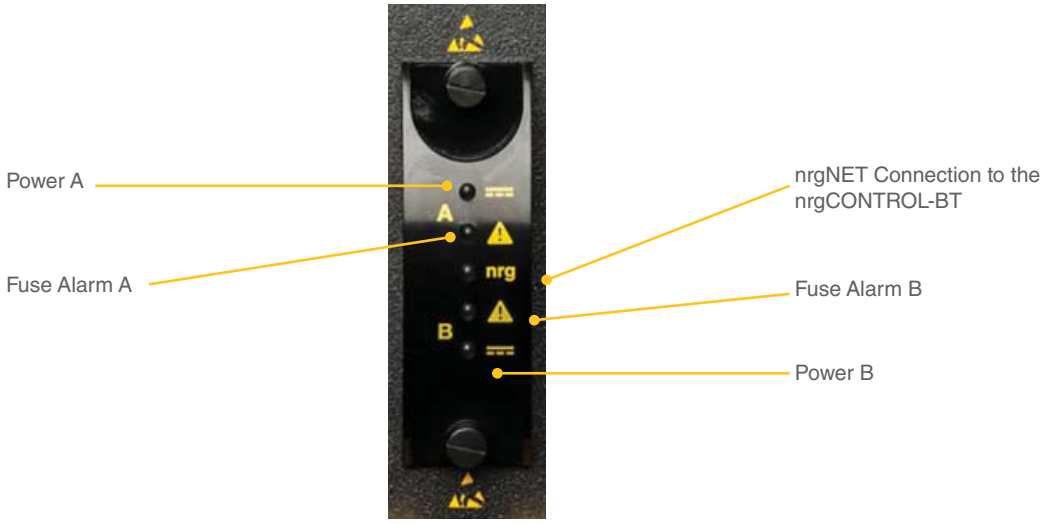

Figure 3 – nrg600BT08-M Alarm Card

LED State	PWR A/B	FUSE Alarm A/B	nrgNET Connection
Green	Operating normally	Operating normally	Active communication to nrgCONTROL-BT
Blinking Green	PWR B, boot loader loading	N/A	Used for visual identification through controller command
Yellow	PWR A, boot loader mode	N/A	N/A
RED	PWR A or PWR B feed voltage alarm < -20VDC	A feed or B feed fuse alarm	Connected to nrgCONTROL, but no communication to this specific panel within last 3 seconds
RED Single Blink	N/A	N/A	Defective panel. Contact Telect for replacement.
RED Double Blink	N/A	N/A	Invalid communication to nrgCONTROL. Check that COM+ and COM- did not get swapped.
No Light	No power to feed	No alarm	No power present on nrgNET IN connector

Boot Loader Mode

The nrg600BT08-M alarm card will receive remote firmware updates automatically from the nrgCONTROL-BT. The boot loader mode is indicated by a yellow PWR A LED. In this mode, the power and fuse LEDs are used for diagnostics and do not represent the power and fuse status. A blinking green PWR B LED in conjunction with the yellow PWR A LED indicates the firmware is actively being updated. The update process lasts approximately 7 seconds.

NOTE: The following steps require that the nrg600BT08-M is connected to an nrgCONTROL-BT controller. The nrgCONTROL-BT provides power to the nrg600BT08-M's alarm card, which is required for steps 17-19 and steps 22-27. Reference the nrgNET connectivity section for further details.

17. Enable protection device (fuse or breaker) at primary PDU to turn on Feed A to Side A of panel and then check voltage and polarity at input connectors of panel. Also, check that
    - PWR A LED on front of panel turns on (green).
    - PWR B LED is off

18. With PWR A LED green (normal operation) — but with PWR B LED off — test power-fail relay and contacts at PWR alarm terminals on rear of panel:
    - Expect open circuit (∞Ω) between Terminals C and NC.
    - Expect an continuity (0Ω) between Terminals C and NO.

19. Also, test fuse alarm relay contacts at fuse (CB/Fuse Alarm) terminals on the rear of the panel.
    - Expect continuity (0Ω) between Terminals C and NC.
    - Expect an open circuit (∞Ω) between Terminals C and NO.

20. Repeat Steps 17 through 19 to power up Side B. PWR A and PWR B LEDs must both be green.

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21. With PWR A and PWR B lit green, test power-fail relay and contacts at PWR alarm terminal:
    - Expect continuity (0Ω) between Terminals C and NC.
    - Expect an open circuit (∞Ω) between Terminals C and NO.

22. For circuit breaker or TPS/TLS output wiring, crimp dual-hole lugs onto one end of #6 to #2 AWG copper output wires for single-pole outputs or #6 to 2/0 AWG for double-pole circuit breaker outputs, as required by NEC. (Work with one output wire at a time.)

ⓘ ALERT

ALERT! DO NOT use a double-pole strap to combine the outputs of two single breakers or two single fuses.

23. Insulate lug barrels with UL 94 V-0-rated heat-shrink tubing.

24. Clean panel terminals and lugs with nonabrasive, nonmetallic pad.

25. If required, lightly coat anti-oxidant on lugs and output **BATT** and **RETURN** terminals, and then connect lugs to terminals. (NEC specifies only one lug and load at each output terminal.)

26. Tighten the nuts to 20 in.-lb (~2.3 N•m), max.

27. For GMT output wiring, use #22 to #12 AWG copper wire and proceed as follows:
    a. Working with one wire at a time, at the panel end of the wire, crimp a single-hole ring or fork lug, as required by NEC.
    b. Clean the panel terminals and lug (if applicable) with a nonabrasive, nonmetallic cleaning pad.
    c. If required, lightly coat anti-oxidant on lug/wire and output **BATT** and **RETURN** terminals, and then connect to terminals. (NEC specifies only one load at each output terminal.)
    d. Tighten panhead screws to no greater than 6.3 in.-lb (~0.7 N•m).
    e. Connect other end of output wire to load.

28. Use the provided designation card to record circuit assignments in accordance with operating company procedures and guidelines.

SIDE A		FUSE TYPE			RACK/BAY #
POS	AMP	DESCRIPTION	POS	AMP	DESCRIPTION

SIDE B		FUSE TYPE			RACK/BAY #
POS	AMP	DESCRIPTION	POS	AMP	DESCRIPTION

Figure 4 – Designation Card

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ⓘ ALERT

ALERT! GMT fuses have a small inherent electrical resistance resulting in a small inherent power loss. For this reason, the GMT fuse manufacturer recommends:

- The load for GMT fuses up to and including 7.5A not exceed 80% of the fuse rating
- The load for GMT fuse sizes between 10A and 20A not exceed 70% of the fuse rating. For example, the load for a 15A GMT fuse should not exceed 10.5A (15A x 0.70 = 10.5A).

29. Make sure load devices are off (disabled) and then install GMT fuses. Remember, GMT fuses need to be installed inverted so that failure indication flags are at the bottom.

30. Test power and polarity at input of each equipment load.

31. If possible, replace one of the operable GMT fuses with a blown fuse to verify that the applicable FUSE Alarm LED turns red. Also, check the FUSE alarm terminals on the rear of the panel:
    - Expect an open circuit (∞Ω) between Terminals C and NC.
    - Expect continuity (0Ω) between Terminals C and NO. Re-install operable GMT fuse before proceeding.
    - If desired, connect remote, external audio/visual panel alarm indicator wires (solid wires, #22 to #18 AWG) to wirewrap PWR and FUSE alarm pins on rear of panel, as shown in Figure 5.

32. Re-install terminal cover.

33. Lastly, enable equipment loads one at a time to verify the proper operation of loads.

34. The total load for all GMT fuse and bullet terminal outputs on each side must not exceed the panel's load rating: 600A.

Figure 5 – Alarm Wire Wrap Contacts

Dry Contact Alarm States

- Alarm card is not installed
  - All contacts will be open
- Alarm card is installed, but no power present on nrgNET
  - All contacts will go to the alarm state (NC and C will be open, NO and C will be closed)
- Alarm card is installed and powered
  - All contacts operate as indicated (NC and C will be closed if no alarm present)

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Accessories & Alarm Card

The following lists optional and replacement items for the panel.

⚠ WARNING

WARNING! Use only UL-listed fuses or UL-recognized component secondary protection devices.

Input & GND Lugs
The following table describes the available input lugs for stranded copper conductors with straight dual-hole lugs for 3/8-in. studs on 1-in. centers.

Table 2 – Input Lugs

Source	#1/0 AWG	#2/0 AWG	#3/0 AWG	400MCM AWG	500MCM AWG	750MCM AWG
T & B	54209	54210	54211	54216	54218	
Panduit	LCD1/0-38D-X	LCD2/0-38D-X	LCD3/0-38D-X	LCD400-38D-6	LCD500-38D-6	LCDN750-38D-6
Burndy				YA322TC38	YA342TC38	YA392NT38

The following table describes the available ground lugs for stranded copper conductors with 90° dual-hole lugs for 1/4-20 bolts on 5/8" centers.

Table 3 – Ground Lugs

Source	#2 AWG	#4 AWG	#6 AWG	#8 AWG
T&B	54207	54206	54205	
Panduit	LCDN2-14A-Q	LCD4-14A-L	LCD6-14A-L	LCD8-14A-L
Burndy	YA2CL2NT14	YA4CL2TC14	YA6CL2TC14	YA8C2TC14

Table 4 – Single-Hole Ring Lug

	#22-18 AWG	#22-16 AWG	#16-14 AWG	#12-10 AWG
AMP	51863	51863	320619	329697
Panduit	PN18-6R-M	-	PV14-6RNB-3K	-
Burndy	YAE18N-21BOX	-	YAE14N-43BOX	-

(Insulated Barrels) with Part Numbers vs Output Wire Size (For #6 Panhead Screws)

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Circuit Breakers

Table 6 – Standard Trip Circuit Breakers

Item	Description	Part Number	Item	Description	Part Number
Single Pole	1A	118714	Double Pole	125A	134634
	2A	119103		150A	134635
	3A	124210		175A	135921
	5A	117852	Triple Pole	200A	134636
	10A	116669		225A	134637
	15A	115999		250A	134638
	20A	116670			
	25A	117402			
	30A	116671			
	40A	116672			
	50A	116673			
	60A	118160			
	70A	118161			
	80A	118162			
	90A	118163			
	100A	118159			

Table 7 – Instantaneous Trip Circuit Breakers

Item	Description	Part Number
Single Pole	20A	140368
	25A	140369
	30A	140370
	40A	140371
	50A	140372
	60A	140373
	70A	140374
	80A	140375
	90A	140376
	100A	140377

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Table 8 – TPS/TLS Fuses

Item	Description	Part Number
TFD Fuse Holder	TPS/TLS Fuse Holder	129816
TPS Fuses	5A	130481
	10A	130485
	15A	130487
	20A	130489
	25A	130476
	30A	130478
	40A	130482
	50A	130484
	60A	130486
	70A	130488
TLS Fuses	80A	140640
	90A	140641
	100A	140642
	110A	140643
	125A	140644

GMT Fuses

For additional dummy fuses, order part number 132748. For GMT safety (splash/splatter) covers, order part number 116915 for GMT fuses up to 15A. Telect recommends using only UL-recognized supplementary protectors.

Table 5 – GMT Fuses

GMT Fuse	Part Number
0.18A Yellow (YEL)	130781
0.25A Violet (VIO)	100151
0.5A Red (RED)	004001
0.75A Brown (BRN)	004008
1A Gray (GRY)	100991
1.18A White (WHT)	004006
1.5A White/Yellow (WHT/YEL)	004011
2A Orange (ORN)	004002
2.5A White/Orange (WHT/ORN)	130783
3A Blue (BLU)	004012
3.5A White/Blue (WHT/BLU)	130782
4A White/Brown (WHT/BRN)	004013
5A Green (GRN)	004014
7.5A Black/White (BLK/WHT)	004010
10A Red/White (RED/WHT)	004015
12A Yellow/Green (YEL/GRN)	102287
15A Red/Blue (RED/BLU)	102288
20A White/Green Without Safety Cover (WHT/GRN)	127240RC
20A White/Green With Safety Cover(WHT/GRN)	131340

Alarm Card

The nrg600BT08-M's alarm card can be replaced if necessary by unscrewing the two screws on the alarm card front bezel. Gently remove the card by pulling straight out. The card can be removed with the nrgNET power still connected (Hot Swapping) to the panel. The replacement part number for the nrg600BT08-M card is the nrg600BT08-AUX.

⚠ WARNING

WARNING! Handle the Alarm Card with care. The alarm card is ESD sensitive. Take ESD mitigation precautions when handling the Alarm Cards.

Temperature Probes

Two temperature probe ports are available on the back of the nrg600BT08-M. Each port is able to accept the optional nrgTEMP probes.

Figure 6 – Temperature Probe Inputs

Figure 7 – Optional nrgTEMP Temperature Probe

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nrg600BT08-M

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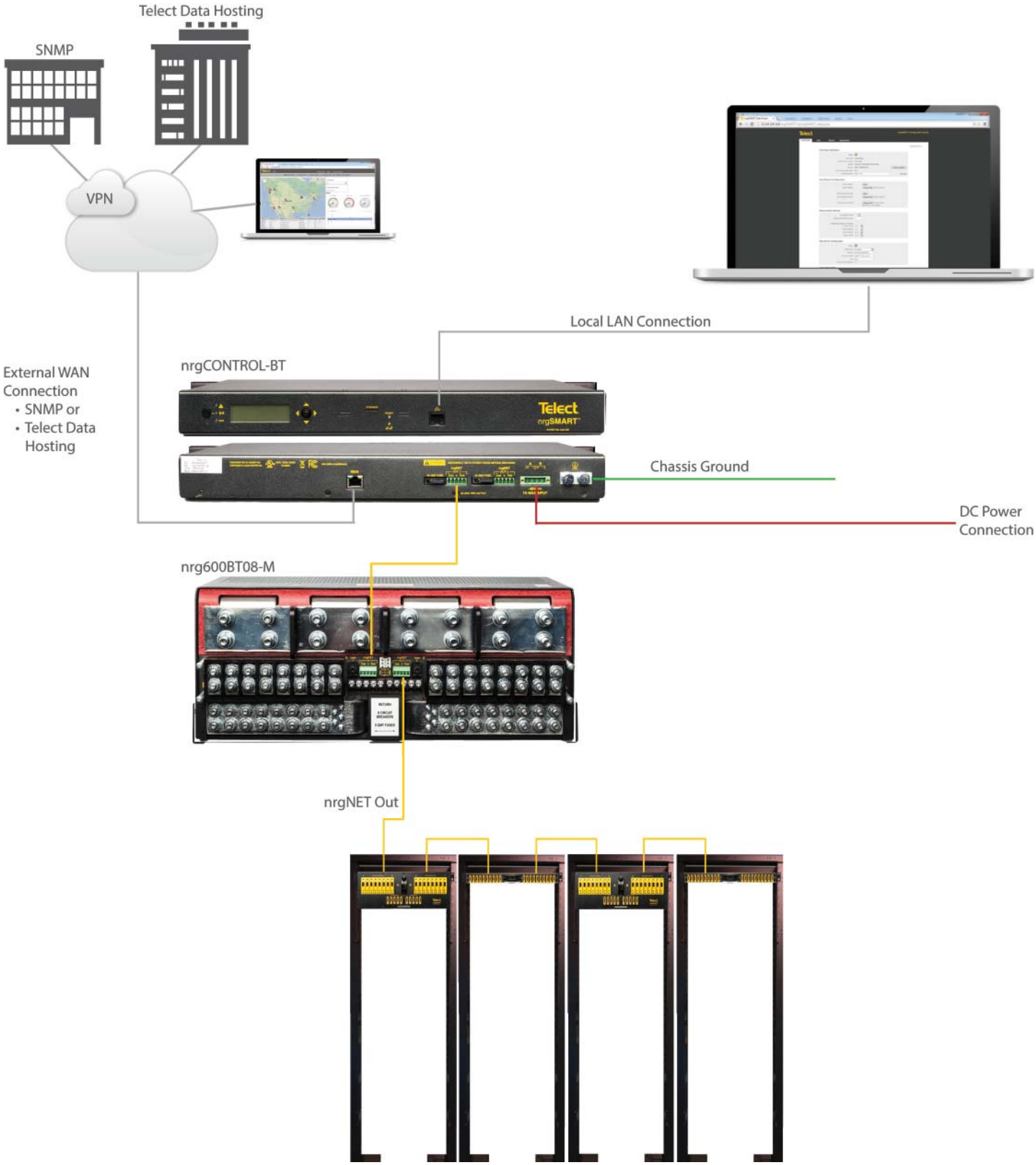
nrgNET Connectivity



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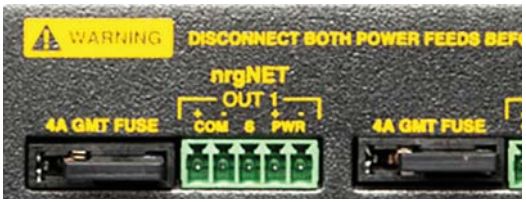
nrgNET Pin Outs

Table 6 – nrgNET Pinouts

Pin Number	Label	Wire
Pin 1	COM +	White (22AWG)
Pin 2	COM -	Blue (22AWG)
Pin 3	S	Drain Wire (24AWG)
Pin 4	PWR +	Red (18AWG)
Pin 5	PWR -	Black (18AWG)

nrgCONTROL-BT



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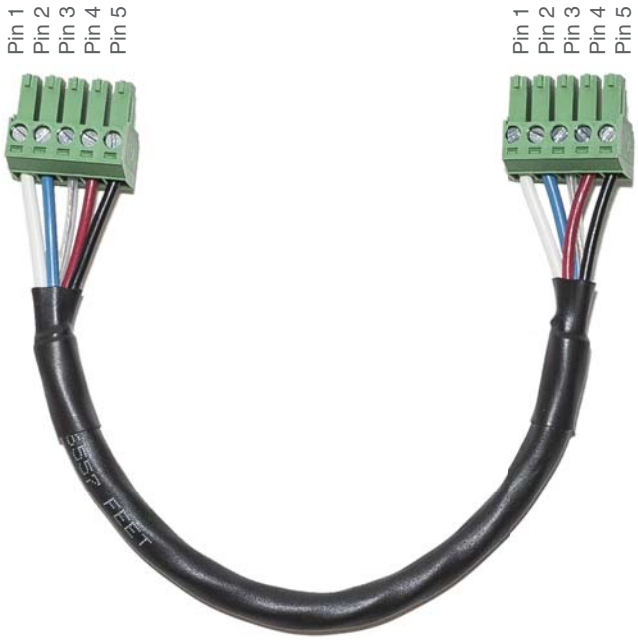

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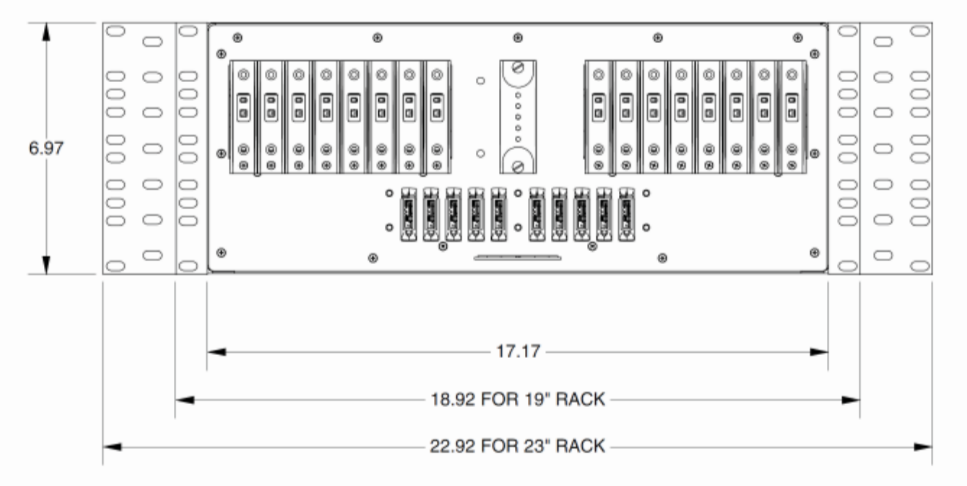
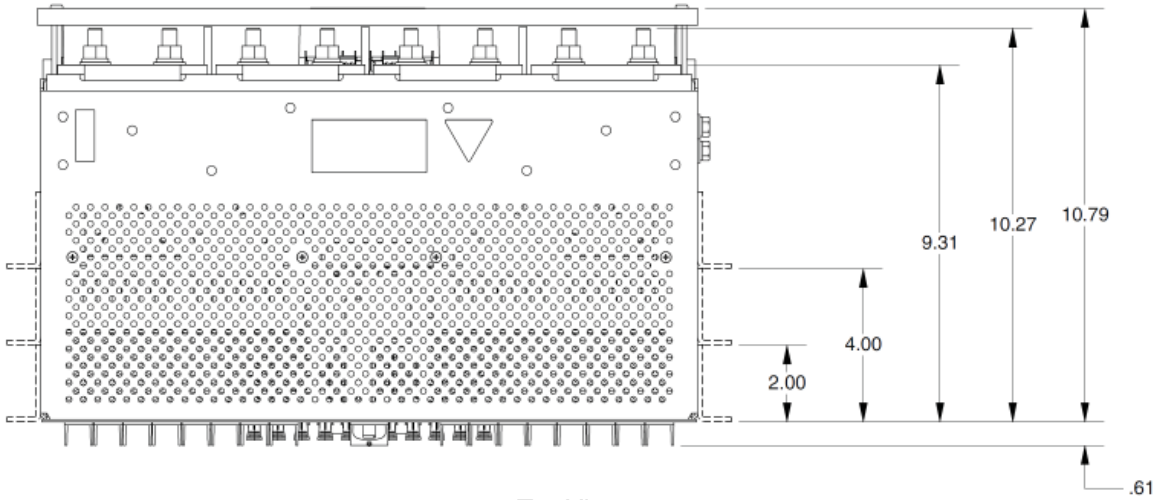
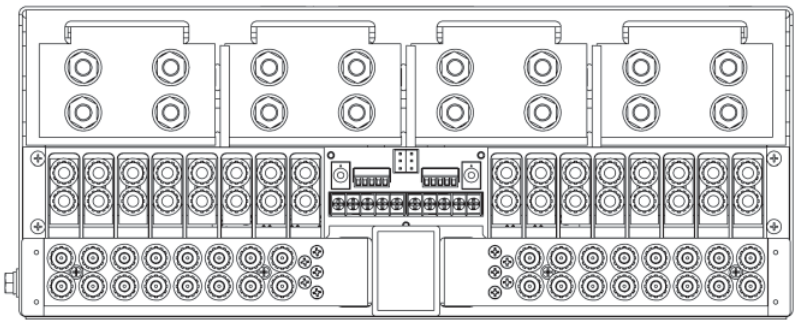
Power :: 600A Load Center with nrgSMART™ Remote Monitoring



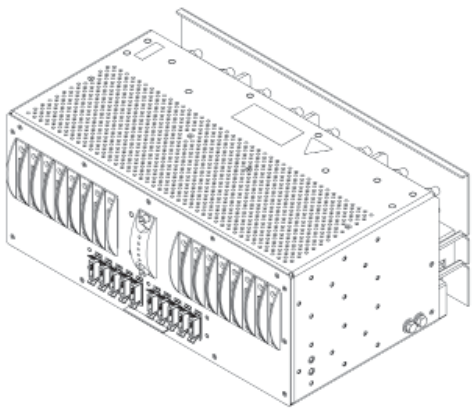
Front View



Top View



Rear View



Side View

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1.509.926.6000 :: telect.com

nrg600BT08-M Preliminary

Power :: 600A Load Center with nrgSMART™ Remote Monitoring

Related nrgSMART Products

Part Numbers	Description	Use
nrgCONTROL Parts		
nrgCONTROL-BT	nrgSMART: CONTROLLER, *Bluetooth®*	nrgSMART Controller with *Bluetooth®*
143142	TERM BLOCK: RCPT, 1x4, 300V, 15A, 5.08 mm, MTG SCRW, 30-12AWG, ROHS	Replacement Power connector

Part Number	Description	Use
nrg600BT08-M		
nrg600BT08-M	nrgSMART: PANEL, 600A DUAL 8/5 GMT, 4RU,-48V, WITH nrgBT and nrgGMT	Fully populated with sensors
nrg600BT08	nrgSMART: PANEL,600A DUAL 8/5 GMT, 4RU,-48V, UN-POPULATED	Base Chassis and Alarm Card, no sensors
nrg600BT08-8800	nrgSMART: PANEL,600A DUAL 8BT, 4RU, -48V, WITH nrgBT	Base Chassis, Alarm Card, and nrgBT sensors
nrg600BT08-AUX	nrgSMART: AUX,ALARM CARD FOR BT/GMT	Replacement alarm card
600CB08-MPK	COVER:REAR,W/EXTENSIONS,MULTI-POLE	2-pole bridge
600CB08-3PK	BUSBAR:ADAPTER,3-POLE,600CB08	3-pole bridge
nrg600CB08-SGL	KIT:nrgSMART,ACC,A/B BUSS BAR BRIDGE TO SINGLE-FEED	
nrgSMART Circuit Modules		
BT	nrgSMART:MOD,BT,PASSTHROUGH,-48V	
nrgBT	nrgSMART:MOD,BT,CURRENT SENSOR,-48V	
BT-TFD	KIT:nrgSMART, MOD, TFD, NON-MONITORING	
BT-CB	KIT:nrgSMART, MOD, CB, NON-MONITORING	
nrgBT-TFD	KIT:nrgSMART, MOD, TFD, MONITORING	
nrgBT-CB	nrgSMART:KIT,MOD,CB,MONITORING,-48V	
nrgBT-TFDFP	nrgSMART:ACC,TFD,FACE PLATE	
nrgBT-CBFP	nrgSMART:ACC,CB,FACE PLATE	
nrgBT-BLANK	nrgSMART:ACC,BT,BLANK FACE PLATE	
nrgGMT	nrgSMART:MOD,GMT,CURRENT SENSOR,-48V	
GMT-BLANK	nrgSMART:MOD,GMT,BLANK FACE PLATE	
System Level Components		
nrgNET-500	nrgSMART: ACC, nrgNET CABLE, SPOOL, 500FT	500 foot spool of cable
nrgNET-10	nrgSMART: ACC, nrgNET CABLE, UN-TERMINATED, 10FT	10 foot length of cable, unterminated
nrgBT-HEX	nrgSMART:ACC,BT,HEX WRENCH	
nrgTEMP	NRGSMART:ACC,TEMP SENSOR,6FT	
141431	TERM BLOCK: RCPT, 1x5, 160V, 8A, 3.81mm, 30-16AWG, ROHS	nrgNET termination connector
133705+B7	BRKT:UNIVERSAL,19IN,4RU,PWTR GRAY	
133800+B7	BRKT:UNIVERSAL,23IN,4RU,PWTR GRAY	
Annual Contracts		
nrgPORTAL-ADH	nrgSMART: ACON, DATA HOSTING	Annual web portal data hosting service
nrgSMART- APSC	nrgSMART: ACON, ANNUAL PRODUCT SUPPORT CONTRACT	Annual product maintenance and support

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FCC Class A Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device many not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide a reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Modification
Any modifications made to this device that are not approved by Telect Inc. may void the authority granted to the user by the FCC to operate this equipment.

ICES-003 Class A Notice - Avis NMB-003, Classe A

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

ELECTROSTATIC DISCHARGE (ESD) PRECAUTIONS

ELECTROSTATIC DISCHARGE (ESD) PRECAUTIONS! When handling any electronic component or assembly you must observe the following antistatic precautions to prevent damage. Always disconnect power from the server and wear a grounded wrist strap when working around the nrgCONTROL-BT. Always wear a grounded wrist strap when handling printed circuit boards. Treat all assemblies, components, and interface connections as static-sensitive.

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